

MYANMAR

By a Special Contributor

For more than 40 years, Burma (Myanmar) has been under military control and in spite of multi-party elections in 1990, which resulted in the principal opposition party winning decisively, the military junta chose not to hand over power. Since then, the opposition leader, Aung San Suu Kyi, has been constantly harassed and has been under house arrest for much of the time. This state of affairs has generated widespread international protest and has had a major negative impact on foreign investment. The Constitution has been suspended since 1974 and a new one has yet to be drafted.

Myanmar has a population of around 42 million and covers an area of some 678,000 km². It has borders with India to the northwest, China to the northeast and Thailand to the southeast. The southern seaboard with the Bay of Bengal and the Andaman Sea extends for almost 2,000 km. The climate is tropical monsoon, and topographically the country is characterised by rugged highlands to the west and east with lowlands in the centre and the south.

The agricultural sector contributes about 57% of GDP and employs about 70% of the workforce, compared with only 7% employed in the industrial sector and 33% in the service industry. GDP is estimated to have contracted by 0.5% in 2003 to about US\$70 billion. However, official statistics are unreliable, there is a thriving black market, and foreign trade in particular does not take account of unofficial border trade, probably including minerals such as jade, gemstones and gold.

Myanmar has a wealth of mineral resources, including base and precious metals, gemstones and industrial minerals but there is a lack foreign investment and foreign aid, and the government has insufficient funds to develop its mineral resources.

Mining contributes less than 1.0% of GDP. There are now only three base metals mines and three gold mines remaining under state ownership, and these are struggling to maintain even a minimal operational capability. In the private sector, mining of gold, jade and gemstones by local companies is believed to be thriving but there is only one foreign company making a significant contribution to mineral sector revenues, Vancouver-based Ivanhoe Mines Ltd.

Ivanhoe, through its subsidiary, Ivanhoe Myanmar Holdings Ltd, holds a 50% interest in a joint venture with No. 1 Mining Enterprise (ME1), an entity wholly-owned by the Government of Myanmar, to develop and operate an open-pit, heap leach copper mine at the Sabetaung, Kyisintaung and Letpadaung deposits, collectively referred to as the Monywa Copper Project.

Monywa was planned in 1996 as a two-stage project with integrated development economics. The first stage, now in its sixth year of operation, produced 27,870 t of copper cathode (13,935 t net to Ivanhoe) in 2003 at cash operating costs of US\$0.39/lb. The mine is expected to produce approximately 32,000 t (70.5 Mlb) of copper in 2004 at similar operating costs.

The increase in production is part of a six-year development plan announced in March 2003. When fully implemented, this will increase annual production to 129,000 t – a level that would establish Monywa as Asia's largest and lowest-cost primary copper producer using advanced heap-leach, solvent extraction and electrowinning (SX/EW) copper recovery process.

Current mining is from the S&K mine (comprising the Sabetaung and Kyisintaung orebodies). Phase II development at Monywa is planned for the Letpadaung deposit located approximately 6 km southeast of the S&K mine. The deposit includes a supergene zone plus a 200 m thick oxide zone and is typified by chalcocite breccia. A bankable feasibility study estimated proven and probable reserves of 906 Mt averaging 0.4% Cu. Further feasibility studies are being undertaken to examine the possibility of developing a 95,000 t/y heap-leach operation.

The JV maintains an active exploration programme and a porphyritic diorite, forming a potentially large porphyry copper-gold target, has been identified that could be a northern continuation of the Monywa area system.

Ivanhoe Mines holds ground across three of the country's four main belts of gold or gold-copper mineralisation. The company's 83%-owned Block 10 concession in central Myanmar comprises an existing small-scale, high-grade gold mine that was operated during the 1930s. Ivanhoe has conducted extensive sampling and mapping of the existing mine adits, crosscuts and shafts. In three areas, SGA, Zinyaw and Bwetchaung, samples have returned gold values of up to 13 m at 9 g/t Au. A drilling programme of 1,500 m is in progress to test these areas for continuity of gold values.

A number of organisations in Canada have urged Ivanhoe to withdraw from Myanmar and have criticised its co-operation with the military dictatorship. The company has responded by pointing out that it is creating permanent jobs in a safe and healthy environment, that it respects international conventions including human rights, and that it is not motivated by political considerations.

Canadian mining juniors, Leeward Capital Corp and Jet Gold Corp, are moving forward with test drilling on the gold mining concession that they inherited from East Asia Gold in northern Shan state. Diamond drilling began in March 2004 on the Set Ga Done concession, which consists of 70,000 ha about 200 km north-northeast of Mandalay and 90 km from the boundary with Yunnan Province in China.

The Department of the Geological Survey and Mineral Exploration (DGSE) undertakes systematic geological mapping and mineral prospecting on a

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regional scale and some 80% of the country has been geologically mapped. On behalf of the Ministry of Mines, the DGSE has signed an agreement with China's International Scientific and Technological Co-operation Department concerning lead-zinc-silver, copper and gold deposits, and moves are afoot to expedite the development of gold and PGM deposits in the north of the country.

On its own account, the DGSE continues to explore for coal and lignite in central Myanmar in response to a government decision to install coal-fired power plants in the country.

State-owned mining operations in the base metals sector are conducted by ME1 in Shan State at Bawdwin, Bawsaing and Yadanatheingi. There are both open-pit and underground operations at Bawdin producing mainly concentrates of lead and zinc. Some smelting equipment has been purchased from China in a bid to boost output. Also, zinc oxide from zinc slags is being transported to a smelter in Yunnan Province, China, enabling ME1 to earn foreign exchange from slag sales. At ME1's two other lead-zinc mines, output continues to fall. The other state-owned mining company, ME2, no longer mines tin-tungsten and its activities are confined to seven joint ventures with several indigenous companies, and one jv with the Thai company Myanmar Pongpipat Co Ltd, which operates the Heinda alluvial tin mine.

ME3 is responsible for iron and steel, coal and lignite, antimony, chromite, nickel and industrial minerals. It operates one steel mill, two coal mines, two barites mines and a gypsum mine, and controls a number of industrial minerals enterprises. Product output has been falling steadily. The development of coal and lignite resources is a priority but there has been little foreign interest.

The government would like to see the development of the Tagaung Taung lateritic nickel deposit in northern Myanmar as a joint venture on either an equity or production-sharing basis. A resource of 40 Mt at 2.02% Ni has been estimated, based on a cut-off grade of 1.4% Ni. A mine project would be contingent upon development of a hydroelectric plant to provide cheap power. The Ministry of Electricity is implementing the Shweli Hydel project in Nam Khan Township, Northern Shan State, 100 MW has been allotted for Tagaung Taung out of 400 MW, and a 230 kV power line will be installed to the mine. The power supply could be available at the end of the year 2004.

The deposit is located 200 km north of Mandalay, and was mined very briefly in the early 1950s. It consists almost exclusively of serpentinitised harzburgite and dunite, and exploration, including drilling and bulk sampling, has been extensive.

Chromite is also present, and is associated with nickel silicate. ME3 produced about 20,000 t in the period 1986-91, and a further 13,000 t was produced in the late 1990s. Currently, ME3 is mining about 500 t/y for the No.1 iron and steel plant, to produce ferro-chrome.

Since April 2000, through Myanmar Gems Enterprise (MGE), the Ministry of Mines has been mining jade and gemstones in production-sharing joint ventures with ten indigenous enterprises, eight for jade in Lonkhin-Pharkant and two for rubies in the Mongshu area. Sales are held bi-annually.

Low-cost artisanal mining of gold, jade and gemstones is an important activity, and illegal mining and smuggling of gemstones remain rampant in the more remote and inaccessible parts of the country.